

## **IN THE SUBSTITUTE SPECIFICATION**

Please cancel paragraphs 012, 023, 026, 029, 033 and 036 of the Substitute Specification. Please replace those cancelled paragraphs with replacement paragraphs, also 012, 023, 026, 029, 033 and 036, as follows:

[012] In the preferred embodiment of Fig. 1, the transfer cylinders 06, which are arranged on both sides of the paper web 03 in each printing unit 02, have been placed against each other in a so-called rubber-to-rubber arrangement. The two transfer cylinders 06, which are arranged in the same printing unit 02, alternately each function as a counter-pressure cylinder. Alternatively, two adjoining printing units 02 can be combined into a satellite printing unit. ~~The printing~~ The printing groups 04 of these printing units 02 are then arranged around a common counter-pressure cylinder, which is separate from the remaining cylinders 06, 07. The paper web 03 is conducted between the counter-pressure cylinder and at least one transfer cylinder 06 which is placed against the counter-pressure cylinder in such a satellite printing unit.

[023] A channel 13, which is extending in the axial direction X underneath the shell face 12 of the forme cylinder 03, and which is provided with a preferably slit-shaped opening 14, for use in holding one or several printing formes 08 on the shell face 12 of a forme cylinder 07 is, for example, provided, as can be seen in Fig. 4. Plate end legs 18, 19, which are beveled or angled off the ends 16, 17 of the printing forme or formes 08, are placed against channel walls 23, 24, which channel walls 23, 24 extend from edges 21, 22 on the shell face 12 of the opening 14 toward the interior of the channel 13. One of the plate ends 16 has been hooked, by means of the plate end leg 18, which leads in the production direction R of the printing forme or formes 08, on the wall 23, which wall

23 extends, in relation to an imaginary tangential line T resting on the opening 14, at a preferably acute opening angle  $\alpha$  in respect to the channel 13. The other plate end leg 19 at the end 17 of the printing forme or formes 08 which trails, in the production direction P of the forme cylinder 07, is held by an outer end 26, which is oriented toward the opening 14 by the use of a preferably strip-like holding member 27, against a wall 24 which wall 24, in relation to a tangential line T resting on the opening 14, extends at a preferably approximately right-angled opening angle  $\beta$  in respect to the channel 13. An inner end 28 of the holding member 27 that is facing away from the channel opening 14, is pivotably seated, for example in a groove 29, which is situated on, or close to, the bottom of the channel 13. An actuating element 32, such as, for example, a pneumatically actuable actuating element 32, and in particular a hollow body 32 which can be charged with a pressure medium, such as, for example, compressed air, and which is reversibly elastically deformable, and which is preferably a hose 32 is arranged in the channel 13. Hose 32, is, for example, supported on a counter-thrust element 31 which is arranged in the channel 13. If the hose 32 is actuated, it pivots the at least one holding member 27 against the force of at least one spring element 33, that is also preferably arranged in the channel 13. The at least one spring element 33 performs a controlled lift, such as, for example, by the use of a guide element 34 that is assigned to it, which is substantially directed in the circumferential direction Y of the forme cylinder 07. The guide element 34 can be arranged on a support element 37, which itself is supported on an interior, arcuate wall 36 of the channel 13. The opening 14 has a slit width V of preferably less than 5 mm at the shell face 12 of the forme cylinder 07. The slit width V lies between 1 mm and 3 mm in particular. In the embodiment represented

in Fig. 4, the holding member 27, the actuating element 32 and the spring element 33 constitute essential elements of a holding device for use in holding one or several printing forms 08 on the shell face 12 of a forme cylinder 07.

[026] The forme cylinder 07 and/or the transfer cylinder 06, which transfers ink, of at least one of the two printing groups 04 that are arranged one after or behind the other in the production direction P is preferably driven by a controllable drive mechanism, which ~~is not~~ is not specifically represented, such as, for example, by an electric motor, and in particular by a frequency-controlled motor. However, each one of the forme cylinders 07 and/or the ink-transferring cylinders 06 of all printing groups 04, which are arranged one behind the other, may be individually driven. When using controllable drive mechanisms, a phase relation, which is assumed with respect to each other of the forme cylinders 07 and/or of the ink-transferring cylinders 06 of at least two printing groups 04, can preferably be controlled as a function of the factor DL of the longitudinal extension. Because of the controllable phase relation of the forme cylinders 07 and/or of the ink-transferring cylinders 06, it is possible, in particular, to affect a circumferential register of the forme cylinders 07.

[029] The control unit can track the center point S of at least one print image location 09, which tracked center point follows a different print image location 09 in the production flow or direction P of the material 03 to be imprinted, with respect to the center point SB of the print image 11 to be imprinted, which center point was displaced during a running printing process, such as, for example, by the longitudinal elongation and/or by the transverse elongation of the material 03 to be imprinted, as seen in Fig. 3. In the process, the control unit controls at least the actuator and/or the phase relation of

the forme cylinder 07 and/or of the ink-transferring cylinders 06, preferably as a function of the value for the factor FL and/or the factor FB and/or the positions X1, Y1, X2, Y2 of the center point S which is stored in the memory unit. For example, the center point S of the print image 11 to be imprinted is detected by a ~~by a~~ detector unit which is connected with the control unit, such as, for example, a device which optically detects and digitally evaluates the print image 11, and which may be, for example, a semiconductor camera with a CCD sensor. For example, the control unit can operate devices, which are connected with it, with the result that the center points S of the print image locations 09 which print a common print image 11 are brought into agreement with the center point SB of the common print image 11 to be imprinted.

[033] To begin with, known or determinable parameters, for taking into consideration the required change of the dimension and/or position of the print image location 09 on a printing forme 08, such as, for example, the factor DL of the longitudinal web elongation, and/or the factor DQ of the transverse web elongation of the material 03 to be imprinted, are supplied to an image application system 40, which is associated with each forme cylinder 07, as depicted schematically in Fig. 1. That image application system 40 applies the print image location 09, such as, for example, by the use of a laser, to the printing forme 08, and is preferably controlled by a computer and on the basis of a digital data set. Therefore, the image application system 40 forms the print image location 09 on a printing forme 08 in accordance with predetermined conditions and, in this way, compensates for the results of the "fan out effect" which are to be expected. In the image application process, the image application system 40 applies the images to the printing forme 08, in particular as a function of the color tone of the cylinder 06

which is transferring the ink, and/or as a function of the arrangement of the printing group 04, with respect to the forme cylinder 07 that is carrying the printing forme 08 in the production flow P of the material 03 to be imprinted, and/or as a function of the position of the printing forme 08 which is arranged on the forme cylinder 07. Thus, in the course of forming a print image location 09, the image application system 40 takes into consideration its position on the forme cylinder 08. This position is customarily determined by an occupation plan that is conceived in a pre-printing stage. Based on the position of the printing forme 08, in accordance with the occupation plan, on one of the forme cylinders 07, the image application system 40 then matches at least some print image locations 09, and preferably matches each print image location 09 in a further printing group 04 that is following a first printing group 04, in its length L, and/or width B, and/or in the position of its center point S, as a function of the above-mentioned influencing values, which were taken into consideration during the formation of the same print image 11. This is done in order to counteract systematic deviations, which are to be expected in the course of the ongoing printing process, and to compensate for these deviations, as much as possible, by a suitable arrangement, or positioning of the print image location 09.

[036] It is furthermore possible, in accordance with the present invention, to counteract at least a part of the transverse elongation of the material 03 to be imprinted by employing an image regulator 38, as depicted schematically in Fig. 1 wherein, prior to its entry into a subsequent or following printing group 04, the material 03 to be imprinted is deformed, preferable in a wave shape, by the image regulator 38 transversely to its production direction R. In this way, the material 03 is reduced, in its width B03, in a manner which counteracts the transverse elongation, as seen in Fig. 3 ~~in Fig. 3~~. Preferably, the intensity or the extent of the width reduction takes place at a reverse ratio with respect to the factor DQ of the transverse web elongation, and can preferably also be changed in the course of the ongoing printing process. The deformation of the material 03 to be imprinted can take place, for example, mechanically by the use of rollers which are preferably placed against both sides of the material 03 to be deformed. To prevent the occurrence of negative effects on the quality, these rollers preferably act outside of the print image 11 on the material 03 to be imprinted and are preferably individually rotatorily driven. Another embodiment of the image regulator 38 provides at least one air nozzle that is directed onto the surface of the material 03 to be imprinted. This at least one air nozzle, for example, permits compressed air to flow against the material 03 to be imprinted. In this way the air nozzle deforms the material 03 to be imprinted in a contactless manner. Preferably, several such air nozzles are provided in connection with this pneumatic image regulator 38, which air nozzles are spaced apart from each other. Preferably at least three air nozzles are provided, wherein the air flow of an air nozzle, which is arranged between two other air nozzles is preferably directed counter to the air flow direction of its adjoining air

nozzles. The result is that the material 03 to be imprinted, which is charged with the air flow, is deformed in a wave shape. With use of the mechanical, as well as with use of the pneumatic image regulator 38, the deformation of the material 03 to be imprinted can preferably be continuously controlled within defined limits by a control unit which controls the image regulator 38. In particular, this deformation can be controlled remotely from a control console which is part of the printing press 01. The control unit can change the center point SB of the print image 11 by actuating the image regulator 38.